UNITED STATES MINERAL PRODUCTS COMPANY

SINCE 1875

STANHOPE, NEW JERSEY 07874

Tel. 347-1200 Area Code 201
Cable: CAFCOINSUL, New York

March 23, 1970

Mario & DiBono Plastering Co., Inc.
370 Northern Blvd.
Great Neck, New York

Attention: Mr. Louis DiBono

Dear Mr. DiBono:

Reference is made to your request regarding the physical properties of U.S. Mineral Products Mark II coating.

Mark II coating is a fibrated hydraulic product which when applied flows together forming a tight durable cementitious finish.

Physical Properties

A. Air erosion resistance; Mark II has a durable hard finish and an air erosion resistance meeting the General Services Administration (G.S.A.) specification of resisting air velocity of not less than 800 F.P.M. and a loss of not more than zero point zero two five grams per square foot for a 24 hour period.

B. Hardness; The hardness of Mark II is dependent on its thickness and applied surface; but is considerable harder than the cafco blaze shield Type D.

C. Bonding; Mark II will bond to cafco blaze shield Type D and will not delaminate. The Bond between Mark II and Type D is stronger than the cafco blaze shield Type D bonds within itself.

D. Fire Resistance; The inorganic formulation of Mark II coating will not support combustion and will not affect the fireproofing quality of the cafco Type D to which it is applied.

We anticipate that the information contained herein is sufficient. If you require additional details please let us know.

Sincerely yours,

U.S. MINERAL PRODUCTS COMPANY

Frank M. Stumpf,
Vice President of Research

UNDERWRITERS' LABORATORIES, INC.

an independent, not-for-profit organization testing for public safety

April 24, 1970

7

L3749

001205

Port of New York Authority
111 8th Avenue, Room 300
New York, New York

Attention: Mr. A. Monti, Construction Manager
World Trade Center

Subject: Fire Resistance Evaluation of Cafco CF Type "D" vs Cafco Type "D"

Gentlemen:

Confirming our telephone conversation of April 23, the Subject investigation is approximately 80 per cent completed. All of our test results to date indicate that Cafco CF Type "D" sprayed fiber is at least as good as Cafco Type "D" in regard to fire resistance. The CF Type "D" may even be slightly better from this standpoint.

Although our test results to date are not 100 per cent conclusive, the indications are that Cafco CF Type "D" will be approved for all of the Floor and Ceiling Designs for which Cafco Type "D" is currently Listed, particularly those incorpora a 1 to 1 blend of cellular and fluted steel deck units and normal weight concrete.

If you should have any further questions regarding this investigation, we would be happy to try to answer them for you so long as we have the permission of United States Mineral Products Company to release our testing information.

Very truly yours,

S. W. BELL
Assistant Engineer
Fire Protection Department

SWB/klr

cc: Mr. Frank M. Stumpf

0012056

UNITED STATES MINERAL PRODUCTS COMPA

SINCE 1875

General Office and Plant
STANHOPE, NEW JERSEY 07874

Tel 347-1200 Area Cod
Cable, CAFCOINSUL, New

8

April 30, 1970

P. Mouri
F. Wegner
W. Boeland
D. Brown

Mr. Louis DiBono
Mario & DiBono Plastering Co. Inc.
136 Liberty Street
New York, New York

Subject: DYNATECH k Factor Test Report

Dear Lou:

As requested, the above thermal conductivity test report is enclosed. This report is not officially released by our Company at this time. The only official statement on the thermal insulation value of CAFCO BLAZE-SHIELD Type D C/F versus regular Type D is that the new Type D C/F is as good as or better than the regular Type D.

This information is being provided to you so that you can intelligently discuss current and forthcoming projects.

We trust this will be satisfactory for your immediate requirements.

Very truly yours,

Harry S. Gropp

Harry S. Gropp
Sales Manager
Architectural Specialty Produc

HSG/

cc: File

International Testing Laboratories, Inc.
Materials Testing and Consulting Engineers
578-582 MARKET STREET
NEWARK, N. J., 07108
PHONE (201) 642-4772-3-4

SUITE A-414
CHICAGO, ILLINOIS.
CABLE ADDRESS, IN

(9)

0012057

METALLURGICAL REPORT

No. 354377 DATE May 5, 1970

From United States Mineral Products Company
Stanhope, New Jersey

Sample of : Cast Blaze-Shield

Marked : Type D-CF
Purchase Order No. B 10786

PHYSICAL TESTS

	#1	#2
Tensile Strength, lbs. per sq. ft.	19.92	22.40
Breaking Load, lbs.	4.98	5.60
Mode of Failure	Within the Fiber	Within the Fiber

To United States Mineral Products Co.
Stanhope, New Jersey

INTERNATIONAL TESTING LABORATORIES,

The liability of the International Testing Laboratories, Inc. with respect to the services charged for herein, shall in no event exceed the amount of the invoice.
Our reports pertain to the sample tested only. Information contained herein is not to be reproduced, except with our permission.

THIS REPORT NOT FOR OFFICIAL RELEASE TO SOURCE OUTSIDE U.S. MINERAL PRODUCTS CO.

DYNATECH

U.S.M.P.C. 41

Report on 0012058

THE THERMAL CONDUCTIVITY OF A SAMPLE OF THERMAL INSULATION

For: United States Mineral Products Company
General Office and Plant
Stanhope, New Jersey 07874

The material submitted for test at a mean temperature of approximately 21C (70F) was stated to be Cafco Blaze-Shield D-CF having a nominal density of approximately 175 Kg m^{-3} (11 lb ft^{-3}).

It was in the form of a flat plate approximately 300 mm square and 25 mm thick and was supplied for test using the Rapid "k" Tester. It was to be evaluated at its nomi thickness and after compression to approximately 19 mm and 13 mm.

For the purposes of the test the sample was placed between two flat 300 mm square aluminum plates. The upper plate contained a heater while the lower plate consiste of cooling chamber, a subsidiary heater and a multi junction thermopile calibrated heat meter. Both plates were automatically controlled at given steady temperature approximately 20 C different from each other. At equilibrium conditions, the temperature of both hot and cold faces was evaluated from thermocouples embedded in plates and the heat flow through the specimen was derived from the output of the he meter.

The thermal conductivity of the test sample was calculated from this heat flow, the temperature difference across the faces, and the known dimensions. The results obtained for the particular sample tested are given in the following table.

Thermal Conductivity of a Sample of Cafco Blaze-Shield D-CF at 20C

Test Density		Test Thickness	Thermal Conductivity	
Kg m^{-3}	lb ft^{-3}	mm	10^2 Watt m^{-1} deg C^{-1}	Btu in h
188	11.7	25.3	3.98	0.
250	15.6	19.0	4.19	0.
330	20.6	13.7	4.38	0.

Reference: IMIP-3

Date: April 28, 1970